



Greening the Fleet

Cleaner Air, Lower Carbon, and a Better Economy

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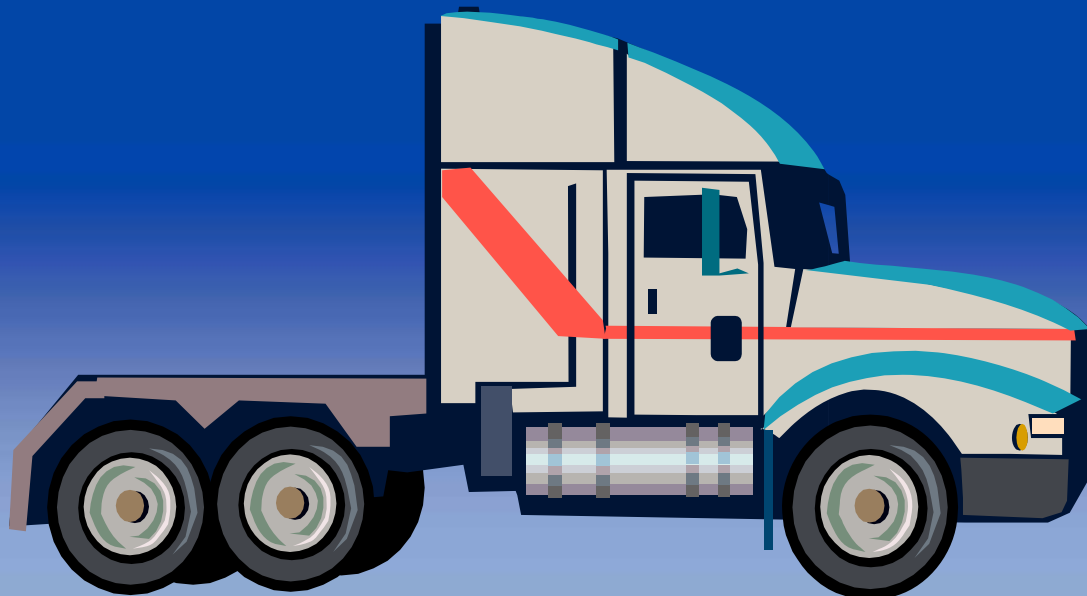


What is Cascade Sierra Solutions?

- An organization of public and private partners, working together to:
 - Save fuel
 - Improve air quality
 - Slow climate change
- Non-regulatory, Not-for-profit
- Showcases multiple brands of fuel-saving technology at truck stops
- Provides a “one stop shop” for truckers

The CSS Mission

CSS identifies, promotes and finances technology to save fuel and reduce pollution from the legacy fleet of trucks.



The Role of CSS

Technology

Grants

Discounts

Rules

Tax credits

Offsets

Financing

Rebates

Technical Assistance



Trucking
Industry

The Long Haul Truck

- ✓ Travels over 500 miles a day
- ✓ 100,000 miles+ per year
- ✓ Uses 20,000+ gallons of diesel fuel
- ✓ Emits 220 tons of carbon dioxide per year
- ✓ 100,000 are on the I-5 corridor at any time



The Long Haul Truck

- ✓ Uses more fuel than any other vehicle
- ✓ Idles 1960 hours a year
- ✓ Wastes 2,000 gallons of fuel a year



Room for Improvement

With a complete upgrade we can save:



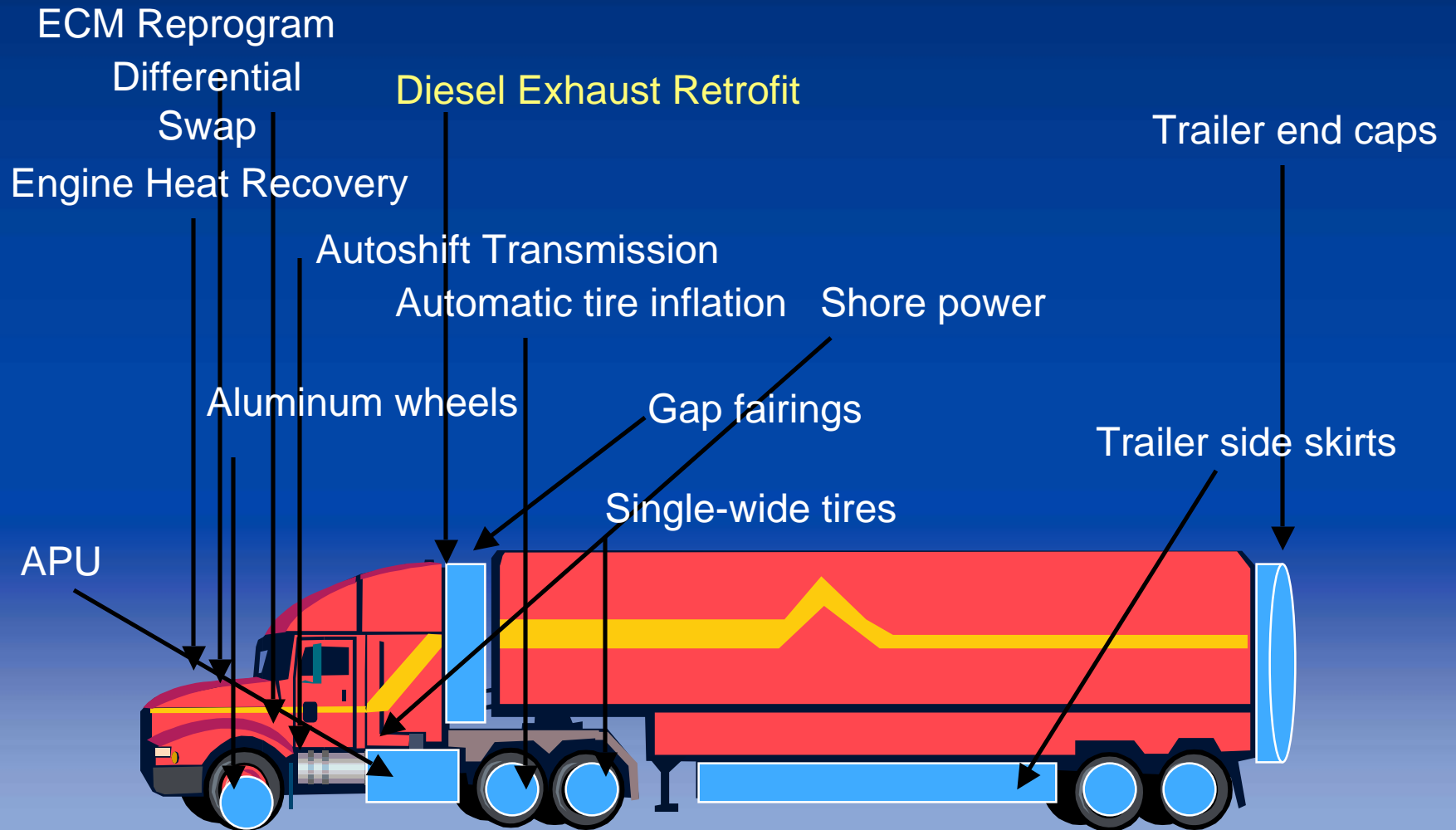
- ✓ 25% of the fuel consumed or 5,000 gallons per truck per year;
- ✓ 25% reduction in PM, NO_x, air toxics
- ✓ 50 metric tons of carbon dioxide per truck, per year

This is one of the biggest opportunities for reducing carbon emissions

Potential Improvement – Each Year

- Upgrading 30,000 trucks would save:
 - 150 million gallons of fuel
 - 625 tons of diesel particulate matter
 - 22,500 tons of oxides of nitrogen-NO_x
 - 1,500,000 tons of carbon dioxide
 - \$450 million in fuel savings

Truck with *SmartWay* Technology



CSS Strategies

- ✓ Implementing EPA SmartWay Upgrades
- ✓ Providing Affordable Upgraded Trucks
- ✓ Promoting new EPA SmartWay Certified Tractors & Trailers
- ✓ Promoting Alternative Fuel Vehicles; and
- ✓ Cleaner and Renewable Fuels

The CSS Outreach Center

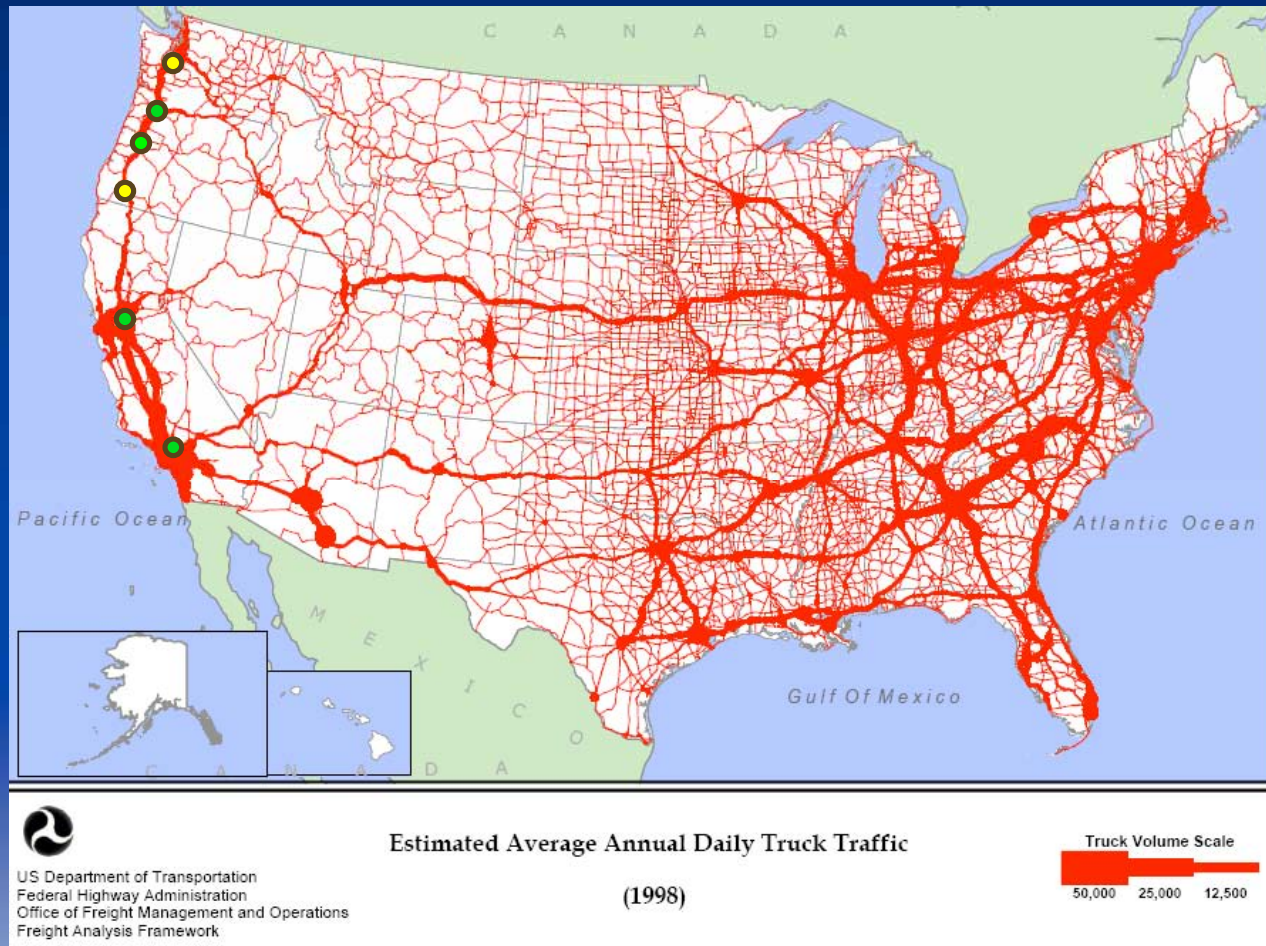
Breaks down
barriers:

- ✓ Awareness
- ✓ Capital Cost
- ✓ Regulatory Information



Coburg, Oregon

Locations



Portland, Oregon



Sacramento, California



APUs



Heaters



Aerodynamics



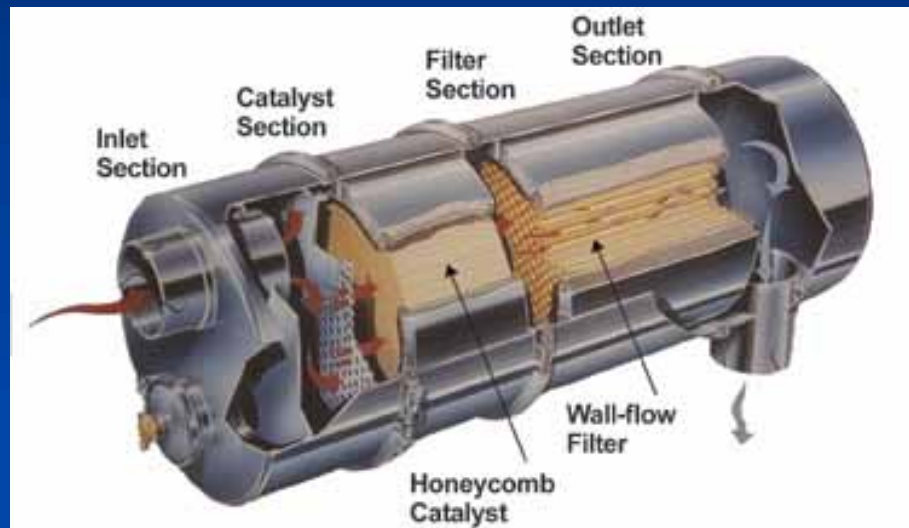
Tires & Wheels



Shore Power Hookups



Exhaust Retrofits



SmartWay Tractors



LNG Tractors



Fleet Case Study

- Replaced 300 trucks
- Baseline FE @ 5.8 mpg
- New truck FE @ 7.73 mpg
- 33.27% improvement
- Average VMT 150,000
- Fuel used before: 25,862 gal
- Fuel used after: 19,404 gal
- Savings of 6,458 gal
- 71 tons of GHGs
- $\$26,000 * 300 = \$7,800,000$

Fleet Case Study

ECM Reprogram: Limiter @ 68, Idle shutoff

Correct
Differential

Diesel Exhaust Retrofit

Autoshift Transmission

Automatic tire inflation

Full Aero Package

Aluminum wheels

Gap fairings

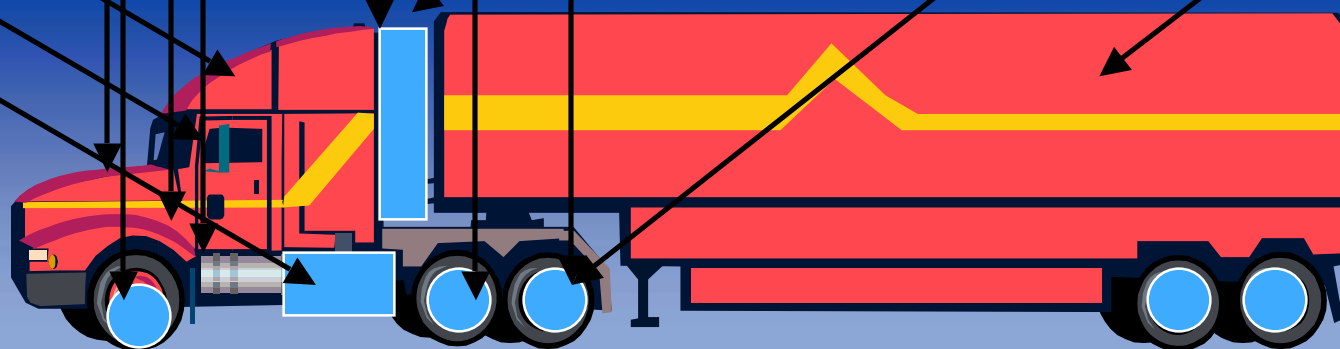
Tag Axle

Super Light Trailer

Fuel Efficient Engine

Single-wide tires

APU



Fleet Incentives



Loan & Lease Programs

- The *Everybody Wins* Revolving Fund
- The *GreenLease* for Truck Replacement
- The *Private Sector Solution*
- The *Bridge to a Better Future*
- SBA Loans

The *Everybody Wins* Revolving Fund

- Finances SmartWay upgrades
- Currently over \$11 million in the fund
- Interest rates of 8-11%
- 10% down payment required, amortized from 3-5 years
- Can be fleets or owner-operators
- Fund operating leases or capital leases
- Funded by grants, private sector banks, SEPs, Carbon credits, donations and CSS surplus
- CSS makes the credit decisions

The *GreenLease* for Truck Replacement

- CSS provides financing as a companion to State grants for truck replacement
- Rates as low as 8%
- Program is a lease-to-own (Capital Lease)
- Fund is backed by private sector banks – CSS expects to finance over \$50 million in 2009

The Private Sector Solution

BCO
(Shipper)

Pays a green truck surcharge

LMC

Provides a loan guaranty for
contracted owner-operators



Buys trucks and leases
to owner-operators

Bridge to a Better Future

- Good trucks in CA going to scrap (2003 models)
- CSS reconditions and retrofits
- CSS offers to small businesses for a lease price of \$250 per month
- CSS retains ownership
- Must scrap a pre-1994 vehicle to be eligible
- Temporary solution to:
 - provide an 80% reduction in emissions
 - Provide a safer, newer and fuel efficient vehicle
 - Allow the 2007 and newer trucks to depreciate so the small business can afford to upgrade
 - Scrap these trucks in 2015-2017

Incentives

- Exhaust Retrofit Grants (CA, OR, WA)
- Tax Credits (Fed, OR)
- Grant processing services for truckers
 - CARB (CA)
 - Truck replacement, retrofit and repower
 - DEQ (OR)
 - Truck scrapping, retrofit and repower
- Shorepower grants (OR, CA)

Progress

- Truck Replacement Projects:
 - 600 completed
 - 1,200+ grants in process (CA)
- SmartWay upgrades:
 - 1,680 Completed
 - 320 In Process

Funding

- More resources in the revolving loan fund
- Ability to leverage
 - Grants
 - Loans
- Money recycling – Fund is never expended and continues to grow to finance the next great improvement
- Creating a perpetual resource
- Funding for a Seattle outreach center

Contact Info



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